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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT	:	Jacquelyn Annette Martino et al.		
SERIAL NO.	:	09/282, 320	EXAMINER	: George Eng
FILED	:	March 31, 1999	ART UNIT	: 2643
FOR	:	MIRROR BASED INTERFACE FOR COMPUTER VISION APPLICATIONS		

REPLY BRIEF TRANSMITTAL LETTER

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA. 22313-1450

Dear Sir:

Appellants respectfully submit three copies of a Reply Brief For Appellants that includes an Appendix with the pending claims. The Reply Brief is now due on January 30, 2005.

Should the Examiner deem that there are any issues which may be best resolved by telephone communication, kindly telephone Applicants undersigned representative at the number listed below.

Respectfully submitted,
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Date: January 24, 2005

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(Signature and Date)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Before the Board of Patent Appeals and Interferences

In re the Application

Inventor	:	**Jacquelyn Annette Martino et al.**
Application No.	:	**09/282,320**
Filed	:	**March 31, 1999**
For	:	**MIRROR BASED INTERFACE FOR COMPUTER VISION APPLICATIONS**

REPLY BRIEF

On Appeal from Group Art Unit 2643

Date: 1/24/05

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TABLE OF CONTENTS

I. REAL PARTY IN INTEREST

Reference is made to the appeal brief.

II. RELATED APPEALS AND INTERFERENCES

Reference is made to the appeal brief.

III. STATUS OF CLAIMS

Reference is made to the appeal brief.

IV. STATUS OF AMENDMENTS

Reference is made to the appeal brief.

V. SUMMARY OF THE INVENTION

Reference is made to the appeal brief.

VI. ISSUES

Reference is made to the appeal brief.

VII. GROUPING OF CLAIMS

With reference to section VI, "ISSUES," four issues are listed in the appeal brief. The claims are grouped according to issue.

VIII. ARGUMENT

(1) Rejection of claims 1-2, 4-7, 9-15 and 18-20 under 35 U.S.C. §103(a) over Kamaya in view of Baumgarten and Janow:

To assess what the Examiner's Answer proposes in combining references, the applicants begin by outlining some of what the applicants finds relevant in the primary reference.

The primary reference, Kamaya, discloses a hand-held (col. 4, line 67 - col. 5, line 2; FIG. 1) video camera 1a adapted for self-photography (abstract, first sentence; FIG. 1). The camera 1a features a lens 5 for capturing an image of the person engaging in self-photography. The outer side of the lens 5 is configured as a convex half-mirror 10 (col. 4, lines 59-60) that simultaneously allows capture of the self-image while reflecting part of the light energy toward the person as a reflection (FIG. 1). Accordingly, the person can see his or her image reflected from the lens 5 and thereby know that the hand-held camera is positioned to capture a corresponding image.

Although the half-mirror 10 reflects some outside ambient light, the video camera 1a is configured, in compensation, with a high sensitivity to ambient light levels as compared with a still camera. Accordingly, "image recording may be accomplished without difficulty in either ambient outdoor light, or indoors under ordinary room lighting conditions" (col. 4, lines 59-63).

The hand-held camera 1a has a start/stop switch 9, which can be pressed once to start recording of the self-image, and pressed again to stop recording. Since "the start/stop switch 9 is in front and closely adjacent the lens 5, ease of operation is assured" (col. 4, lines 27(28)-28(29)).

When the person starts recording by pressing the start/stop switch 9, the zoom control of the camera is automatically set to "the widest possible field of view of the lens 5" (col. 4, lines 32(33)-34).

Starting with claim 18, it recites:

> A method of framing an image of an object within a camera image comprising the steps of: aligning a mirror having a two-way transparent center area having a field of view that substantially corresponds to a field of view of the camera, and attaching the mirror to an external surface of the camera so as to provide a mirror image that is representative of the camera image except for the transparent solid center area, and adjusting a position of the object in dependence upon the mirror image and thereby frame the image of the object in the camera image.

Although the Examiner's Answer acknowledges that Kamaya fails to disclose or suggest "the transparent solid center area" of the "mirror," the Examiner's Answer suggests that this shortcoming is collectively compensated by the Baumgarten and Janow references.

The Examiner's Answer suggests replacing the Kamaya half-mirror 10. Specifically, the Examiner's Answer proposes to adapt the Baumgarten hole 80 to the periphery of the Kamaya lens 5 so as to surround the lens with the Baumgarten reflecting surface 32 (Baumgarten, FIG. 5; col. 6, lines 1-14). The Examiner's Answer further suggests, based on Janow (FIGs. 5-7; col. 5, line 11 – col. 6, line 13), to fill the Baumgarten hole with a Janow transparent material 701. Alternatively, the Examiner's Answer appears to intend to modify Kamaya according to the Baumgarten FIG. 2 embodiment instead, and to, based on Janow FIG. 7, remove a reflective backing from the Baumgarten one-way mirror 36 in an area corresponding to the lens of the Baumgarten camera 70.

Firstly, however, fitting the Baumgarten reflective surface 32 around the Kamaya lens 5 would interfere with user's hand, as shown in Kamaya FIG. 1. The proposed combination would further interfere with the user's access to, and/or operation of, the Kamaya start/stop switch 9. At a minimum, the user would not be able to see the switch 9. Since "the start/stop switch 9 is in front and closely adjacent the lens 5, ease of operation is assured" (Kamaya, col. 4, lines 27(28)-28(29)). The proposed modification to introduce the Baumgarten reflective surface 32 would interfere with the Kamaya "ease of operation," and, at least for this reason, one of ordinary skill in the art would not have been motivated to make such a modification.

If the Examiner's Answer contemplates drastically reducing the size of the Kamaya lens 5 to resemble the size of Janow lens 507 so as to make room for the Baumgarten reflective surface 32, this would likewise be impractical.

Since the Kamaya camera 1a is hand-held (FIG. 1), the user is close to the lens 5. Accordingly, when the person starts recording by pressing the start/stop switch 9, the zoom control of the camera is automatically set to "the widest possible field of view of the lens 5" (col. 4, lines 32(33)-34).

In comparison, the Janow user 125 is located far from the camera lens 507 (FIGs. 1, 5-7; col. 2, lines 30(31)-34(35), 39-54).

Attempting to attain the Kamaya lens 5 wide field-of-view (FOV) with the much smaller Kamaya lens 507 would, firstly, introduce considerable distortion into the captured image.

Secondly, according to Kamaya, such a modification is unnecessary. The Examiner's Answer seems to suggest substituting the Janow transparent material 701 for

the Kamaya half-mirror 10 to allow the Kamaya camera 1a to retain more incoming light, i.e., by reflecting less of the incoming light that embodies the image to be captured by camera. However, Kamaya does not regard the partial reflection of light as problematic. Kamaya states, "image recording may be accomplished without difficulty in either ambient outdoor light, or indoors under ordinary room lighting conditions" (col. 4, lines 59-63). It is unclear why one of ordinary skill in the art would introduce considerable distortion into the Kamaya camera image to prevent some of the incoming light from being reflected, given that such reflection is not problematic.

According to the above analysis, it is unclear what would have motivated modifying Kamaya in view of Janow. Further reasons why applying Janow is inappropriate will be provided below.

It is also unclear what would have motivated re-designing Kamaya to operate with an unwieldy Baumgarten reflecting surface 32 that interferes with the user operating the start/stop switch 9 that, as stated by Kamaya, is disposed for ease of use "closely adjacent to the lens 5" (Kamaya, col. 4, lines 27(28)-28(29)). Notably, Baumgarten utilizes its reflecting surface 32 to alert a PC user to the presence of persons behind the user that may be positioned to view the user's PC screen and any confidential information on the screen, and also to allow the user to inspect his or her own appearance "prior to or during a video communication" (Summary of the Invention, col. 1, line 66 – col. 2, line 3). Prior to the video communication, the user can shift his or her head around to inspect their appearance, so that the sizable hole 80 shown in FIG. 5 is tolerable. It is unclear, however, what would have motivated creating at least equally-sizable center of non-

reflection by removing the half-mirror 10 from Kamaya, even if the considerable disadvantage of the Baumgarten reflecting surface 32 in Kamaya could be ignored.

Further regarding the Baumgarten reflecting surface 32 and its disadvantages in the combination proposed by the Examiner's Answer, a surface that would be required to surround the lens 5 in Kamaya FIG. 1 and reflect some kind of outline of the user would protrude so as to make the camera unwieldy and would be easily broken if the camera were dropped. Making the surface detachable introduces the inconvenience of having to connect it to the camera, and such a large detachable surface would be awkward to store and transport.

As mentioned above, there exist additional reasons why the application of Janow in rejecting claim 18 is inappropriate. The Examiner's Answer presumably introduces Janow to fill in the Baumgarten hole 80 with Janow transparent material 701. However, the Baumgarten hole 80 is a hole in a mirror, whereas the Janow transparent material 701 fills in a hole in a Janow projection screen 105 rather than in a mirror.

As the appeal brief explains, if the Janow projection screen 105 were a mirror, the image of the Janow user 125 would interfere with the image projected from the mounted concave mirror 103 (FIG. 1).

Thus, at best, Janow might disclose or suggest to the artisan to arrange a camera 509 behind a projection screen.

In response to the appeal brief, the Examiner's Answer now introduces the notion the Janow projection screen 105 has a reflective coating (col. 5, line 56). However, Janow states that such screens "typically have a lenticular structure on their viewing surface" (col. 3, lines 40-41). Lenticular front projection screens (Janow, col. 3, line 5:

"front projection") are implemented with an array of lenses. Each lens directs the light being projected in different directions. The reflective coating is confined to particular regions of each lens (see, e.g., assignee's U.S. Patent No. 4,964,695). Accordingly, a lenticular front projection screen is not a mirror. It is therefore unclear what role Janow could serve in the proposed combination, how the proposed combination could be construed as resembling the present invention as recited in claim 18, or by what motivation the proposed combination would have been obvious.

Moreover, what the applicants understand the Examiner's Answer to intend as an alternative combination, based on Baumgarten FIG. 2, appears to have no more merit than the combination based on Baumgarten FIG. 5.

Claim 1 likewise recites, "the mirror has a two-way transparent solid center." Accordingly, claim 1 distinguishes patentably over the proposed combination of references for at least the same reasons set forth above.

In addition, claim 1 recites, ". . . a mirror, movably arranged at an angle to the camera . . ."

The Examiner's Answer cites the Baumgarten pivotal mounting of housing 20 to the upright member 26 (col. 3, lines 39-45(46)). Such a configuration, however, apparently pivots the Baumgarten camera 70 in unison.

In any event, it is unclear how this pivot applies to the Kamaya hand-held camera 1a. Perhaps, the Examiner's Answer is suggesting that the Kamaya cylindrical lens barrel 6 be pivotally mounted. It is unclear how this would impact on the mechanical integrity of the Kamaya camera 1a, or what advantage might be afforded by such pivoting.

For at least all of the above reasons, the proposed combination fails to render obvious the present invention as recited in claim 1.

Claim 11 recites the solid central two-way transparent area for the mirror, the mirror being movably arranged at an angle.

For at least all of the above reasons, the proposed combination fails to render obvious the present invention as recited in claim 1.

Claim 15 likewise recites the same above-noted features of claim 11, and is likewise deemed to be patentable.

Claims 2, 4-7, 9, 10, 12-14, and 19-20 are believed to be allowable at least for their dependence upon an independent claim believed to be allowable, as well as because of an independent basis for patentability.

Accordingly, reversal of all grounds of rejection under 35 U.S.C. §103(a) by the Honorable Board are requested in light of the foregoing.

(2) (3) (4) **All rejections under 35 U.S.C. §103(a):**

(2) With regard to the rejection of claim 3, the addition of Braun to the combination of Baumgarten, Kamaya and Janow, still fails even to disclose or suggest Applicants' base claim 1, let alone disclose or suggest all the elements of instant claim 3. Reconsideration and withdrawal of this ground of rejection are respectfully requested.

(3) With regard to claim 8, the addition of Kawashima to the combination of Baumgarten, Kamaya and Janow, still fails even to disclose or suggest Applicants' base claim 1, let alone disclose or suggest all the elements of instant claim 8. Reconsideration and withdrawal of this ground of rejection are respectfully requested.

(4) With regard to claims 16-17, Applicants respectfully submit that the addition of Parulski to the combination of Baumgarten, Kamaya and Janow, still fails even to disclose or suggest Applicants' base claim 15, let alone disclose or suggest all the elements recited by instant claims 16 and 17. Reconsideration and withdrawal of this ground of rejection are respectfully requested.

Reversal of all grounds of rejection under 35 U.S.C. §103(a) by the Honorable Board is requested in light of the foregoing.

IX. CONCLUSION

In view of the above analysis, it is respectfully submitted that the referenced teachings, whether taken individually or in combination, fail to anticipate or render obvious the subject matter of any of the present claims. Therefore, reversal of all outstanding grounds of rejection and allowance of all the pending claims are respectfully solicited.

Respectfully submitted,

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Date: 1/24/05

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X. APPENDIX: THE CLAIMS ON APPEAL

Reference is made to the appeal brief.